

Claims

5 1- Independent heat exchange unit for mounting inside a building and
comprising a box (12) provided with walls (14, 30) bounding two fluid
passages having a cross section of undulating shape, and air circulation
means (38, 44, 46) for causing a counter current circulation in the two
10 fluid passages, on the one hand a stream of fresh air (AN) obtained from
outside the building and on the other hand a stream of stale air (AV) from
inside the building,

characterised in that the walls bounding the fluid passages comprise a thin
flexible foil (30) forming undulations (32) capable of being deformed as a
15 function of the respective pressures of the stream of fresh air (AN) and of
the stream of stale air (AV), and in that the said foil (30) is made of a
material which is air-tight, such as a tissue or woven fabric, a non-woven
fabric, or a plastics material.

20 2- Unit according to Claim 1, characterised in that the material of the foil
(30) is furthermore impervious to water vapour.

3- Unit according to Claim 1, characterised in that the material of the foil
(30) is furthermore permeable to water vapour.

25 4- Unit according to one of Claims 1 to 3, characterised in that the box
(12) is of a generally elongated shape, and that the undulations (32) of the
flexible foil (30) have generatrices which are substantially parallel and
extend in the direction of the length of the box.

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Sub.
B.^{1.}

5- Unit according to Claim 4, characterised in that the box (12) is arranged vertically, and in that the generatrices of the undulations are substantially vertical.

5 6- Unit according to one of Claims 1 to 5, characterised in that the air circulating means comprise at least one entry fan (38) for introducing into the interior of the building a stream of fresh air (AN) obtained from outside and at least one extraction fan (44, 46) for extracting out of the building a stream of stale air from the interior.

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7- Unit according to Claim 6, characterised in that the air circulating means comprise at least one entry fan (38) mounted in a central region of the box and two extraction fans (44, 46) mounted respectively in the two end regions of the box.

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8- Unit according to Claim 7, characterised in that the box is mounted generally vertically, and in that the two extraction fans (44, 46) are arranged respectively in the upper part and in the lower part of the box.

20 9- Unit according to one of Claims 7 and 8, characterised in that it has two heat exchangers associated respectively with the two extraction fans (44, 46) and each having a flexible foil (30).

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B.^{3.} 25

10- Unit according to one of Claims 7 to 9, characterised in that it includes control means (52) for achieving selectively the running or stopping of the or each entry fan (38) and/or the or each extraction fan (44, 46).

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11- Unit according to Claims 8 and 10 taken in combination, characterised in that the control means (52) are arranged to achieve the

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running of the or each entry fan (38) and the running of one and/or the other of the extraction fans (44, 46).

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